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**(54) ULTRASONIC  
CLEANING APPARATUS**

(57) Abstract:

**PURPOSE:** To remove dissolved gas in liquid such as oxygen and improve cleaning effect by immersing solid in liquid in a cleaning tank characterized by having a deaeration part and an ultrasonic wave generation part and cleaning the solid with ultrasonic waves moving in the liquid.

**CONSTITUTION:** Ultrasonic energy emitted from an ultrasonic wave generation part 2 is transmitted in liquid 3 so that solid 5 to be cleaned is irradiated with the ultrasonic waves. On the other hand, in a deaeration part 10 arranged in a cleaning tank 1, the liquid 3 in the cleaning tank 1 is circulated through the inside of a deaeration module 13 in the deaeration part 10 by a liquid circulation pump 11, and dissolved gas 4 gasified by a deaeration pump 12 is vacuum- sucked through the outside of the deaeration module 13 to deaerate the dissolved gas in the

liquid 3. By placing almost the whole deaeration part 10 in the cleaning tank 1, the increase in a liquid circulation route of gas is minimized. Moreover, by the improvement of cleaning efficiency, the dissolved gas 4 in the liquid 3 such as oxygen can be removed efficiently.

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